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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,596	07/22/2003	Yuan-Ting Wu	BHT-3212-32	5840

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EXAMINER

HALEY, JOSEPH R

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,596

Applicant(s)

WU ET AL.

Examiner

Joseph Haley

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 10, 11 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed "pre-gap" and "general application area" do not have any description as to the function of these two areas.

Claims 10 and 11 recites the limitation "the formatted message" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 13 and 18-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohata et al. (US 6469978) in view of Sasaki (US 2003/0033475).

In regard to claim 1, Ohata et al. teaches a method for an optical recording device to background format an optical recording medium, the optical recording medium comprising a plurality of defect management areas (DMAs) arranged sequentially, each of the DMAs comprising a data area (DA) and a spare area (SA)

(fig. 2 see also column 7 lines 20-24 where Ohata discusses a plurality of zones), each of the DAs and each of the SAs comprising a plurality of packets to record digital data, each of the packets comprising a plurality of blocks, each block having a corresponding address for distinguishing (column 7 lines 30-35), the background formatting method comprising the following steps: (A) establishing a format recording table and storing the format recording table in a memory in the optical recording device, the format recording table comprising a plurality of recording units to record whether the packets in the DMAs are recorded with digital data (fig. 3), however; Ohata et al. does not teach when formatting a certain packet in the optical recording medium by a predetermined formatting process, inspecting the corresponding recording unit in the format recording table; if the corresponding recording unit indicates that there is no digital data in the current packet, starting formatting, otherwise skipping the current packet and formatting the next packet; and (C) repeating step (B) for all the packets in the optical recording medium.

Sasaki teaches when formatting a certain packet in the optical recording medium by a predetermined formatting process, inspecting the corresponding recording unit in the format recording table; if the corresponding recording unit indicates that there is no digital data in the current packet, starting formatting, otherwise skipping the current packet and formatting the next packet; and (C) repeating step (B) for all the packets in the optical recording medium (see background of invention paragraph 12 lines 2-4).

The two are analogous art because they both deal with the same field of invention of formatting an optical medium.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Ohata et al. with the formatting method of Sasaki. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Ohata et al. with the formatting method of Sasaki because it would provide quicker formatting.

In regard to claim 2, Ohata et al. teaches the optical recording device receives a computer command from a host computer, and the optical recording device operates according to the content of the computer command (column 3 lines 40-55).

In regard to claim 3, Sasaki teaches the computer command is chosen from one of the following commands: a formatting command, a data writing command and a data reading command (column 3 lines 40-55 Ohata discusses read/write and formatting operations).

In regard to claim 4, Ohata et al. teaches the optical recording device comprises an optical pickup head to read/record data in the optical recording medium, and the predetermined formatting process is performed by the optical pickup head writing a formatted information in the packet designated to format in the optical recording medium for identifying (fig. 13 element 3).

In regard to claim 5, Ohata et al. teaches the host computer transmits a formatting command to the optical recording device, the optical recording device performs only a necessary preliminary formatting procedure and then transmits a receiving message to inform the host computer that the formatting command has completely executed (fig. 5).

In regard to claim 6, Ohata et al. teaches the optical recording medium comprises a main table area (MTA) (fig. 3), a pre-gap and a general application area (GAA) (see fig. 2), the necessary preliminary formatting procedure formatting only the MTA, the pre-gap and the GAA to the optical recording medium (Ohata et al. teaches formatting the data area and the table area which is regarded as the same thing).

In regard to claim 7, see claim 1 rejection above (after receiving a message to format the host computer would finish it).

In regard to claim 8, Ohata et al. teaches wherein every recording unit of the format recording table corresponds one by one to a packet in a DMA (the control area in fig. 11 has information regarding all the packets in the medium).

In regard to claim 9, Ohata et al. teaches if the host computer transmits the data writing command to the optical recording device, the optical recording device will record the digital data in the corresponding packet, according to the address in the data writing command, in the optical recording medium and record an information that the packet already has digital data on the corresponding recording unit in the format recording table (Ohata et al. must write data on the medium according to address in the data writing command).

In regard to claim 10, Ohata et al. teaches wherein before formatting the optical recording medium is finished, if the host computer transmits the data reading command to the optical recording device, the optical recording device inspects the corresponding recording unit, according to the address in the data reading command, to judge whether the packet in the optical recording medium has not been formatted and not

recorded any digital data, then transmits the formatted message to the host computer after judged that the packet has not been formatted and not recorded (see fig. 3 Ohata et al. teaches scanning the prescribed recording units for errors according to address information then send the information back to be written in the management table).

In regard to claim 11, Ohata et al. teaches when the optical recording device receives the data reading command, if the packet in the optical recording medium is confirmed as not formatted and not recorded with any digital data, the optical recording device will not drive the optical recording device to read data and will directly transmit the formatted message to the host computer (if nothing is written in a data area the optical recording device won't read it).

In regard to claim 12, Ohata et al. teaches the memory comprises a plurality of memory units numbered sequentially, the recording units in the format recording table correspond to some memory units stored in the memory (fig. 15).

In regard to claim 13, Ohata et al. teaches each of the recording units stores a writing flag to show whether the corresponding packet has recorded digital data (fig. 15 see UB).

In regard to claims 18, Ohata et al. teaches the optical recording medium is a CD-RW (Compact Disk ReWritable) or a DVD+RW (Digital Versatile Disk plus ReWritable) (column 3 lines 30-31 Ohata et al. teaches the use of a rewriteable optical recording medium).

Apparatus claims 19-34 are drawn to the apparatus corresponding to the method of using same as claimed in claims 1-13 and 18. Therefore apparatus claims 19-34 correspond to method claims 1-13 and 18, and are rejected for the same reasons of obviousness as used above.

Claims 16 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohata et al. in view of Sasaki further considered with Evans et al. (US 6311060).

In regard to claim 16 Ohata et al. and Sasaki teach all the elements of claim 15 except wherein after the optical recording device has background formatted the whole optical recording medium, the optical recording device deletes the format recording table from the memory to release the memory capacity.

Evans et al. teaches deleting unused information to free up memory space (column 30 lines 46-50).

The three are analogous art because they deal with memory management in information systems.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Ohata et al. and Sasaki with the memory management of Evans et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Ohata et al. and Sasaki with the memory management of Evans et al. because it would allow memory to free up more space when information is not being used.

Claims 17 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohata et al. in view of Sasaki further considered with Official Notice.

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Ohata et al. and Sasaki teach all the elements of claims 17 and 33 except wherein the memory is DRAM. The examiner takes Official Notice that DRAM is a well known form of memory and it would have been obvious to use this form of memory because of its dependability and relative availability.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohata et al. in view of Sasaki further considered with Nakatani et al. (US 2002/0114614).

In regard to claim 14, Ohata et al. and Sasaki teach all the elements of claim 14 except the memory capacity of each recording unit is one bit; the writing flag with 0 means the corresponding block records no digital data, while the writing flag with 1 means the corresponding block records digital data.

Nakatani et al. teaches the memory capacity of each recording unit is one bit; the writing flag with 0 means the corresponding block records no digital data, while the writing flag with 1 means the corresponding block records digital data (paragraph 86 lines 12-16).

The three are analogous art because they both deal with the same field of invention of recording onto an optical medium.

At the time of invention it would have been obvious to one ordinary skill in the art to provide the apparatus of Ohata et al. and Sasaki with the flag of Nakatani et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Ohata et al. and Sasaki with the flag of Nakatani et al. because it would indicate whether or not an area has been recorded.

In regard to claim 15, Nakatani et al. teaches the writing flag with 00 means the corresponding block is not formatted and not recorded digital data, the writing flag with 01 means the corresponding block records digital data, while the writing flag with 10 means the corresponding block is formatted (paragraph 86 lines 12-16 while the bits are not the same Nakatani et al. teach two bits that determine whether or not the area has information and whether or not it can be edited).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Motohashi (US 2003/0095484) teaches formatting only the unrecorded areas to decrease formatting time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrh 


TAN DINH
PRIMARY EXAMINER

2/21/06